

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Canceled without prejudice or disclaimer).

2. (Previously Presented) An active matrix display device using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode and a passivation film are successively laminated, and the surface portion of the semiconductor layer on the passivation film side is porous, wherein depth of the porous portion is not less than 1 nm and not more than 30 nm from the surface of the semiconductor layer on the passivation film side.

3. (Previously Presented) An active matrix display device using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode and a passivation film are successively laminated, and the surface portion of the semiconductor layer on the passivation film side is porous, wherein volume of the voids is not less than 5% in the porous area of not less than 1 nm and not more than 30 nm from the surface of the semiconductor layer on the passivation film side.

4. (Previously Presented) An active matrix type display device using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode and a passivation film are successively laminated, and the surface portion of the semiconductor layer on the passivation film side is porous, wherein the average value of radius of the voids in the porous portion is not more than 5 nm.

5. (Previously Presented) An active matrix display device using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode and a passivation film are successively laminated, and the surface portion of the semiconductor layer on the passivation film side is porous, wherein not less than 0.01 atom % and not more than 0.1 atom % of helium is contained in the porous area of not more than 30 nm in depth from the surface of the semiconductor layer on the passivation film side.

Claims 6-8 (Canceled without prejudice or disclaimer).

9. (Previously Presented) An active matrix display device using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode

and a passivation film are successively laminated, and the surface portion of the semiconductor layer on the passivation film side is porous, wherein the current value between the source electrode and the drain electrode in the case of applying a voltage of -40 V to +40 V to a second electrode (a back gate electrode) provided on the switching element is not more than 10 times the current value between the source electrode and the drain electrode in the case of providing no back gate electrode.

Claims 10-15 (Canceled without prejudice or disclaimer).

16. (Currently Amended) An active matrix display device according to claim 15, using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode and a passivation film are successively laminated, and means, formed on a surface portion of the semiconductor layer between the semiconductor layer and the passivation film, for preventing fixed charges from the passivation film from entering the semiconductor layer, wherein said means comprises a porous semiconductor region formed between semiconductor layer and said passivation film, and wherein depth of the porous semiconductor region is not less than 1 nm and not more than 30 nm from the surface of the semiconductor layer on the passivation film side.

17. (Currently Amended) An active matrix display device according to claim 15, using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode and a passivation film are successively laminated, and means, formed on a surface portion of the semiconductor layer between the semiconductor layer and the passivation film, for preventing fixed charges from the passivation film from entering the semiconductor layer, wherein said means comprises a porous semiconductor region formed between semiconductor layer and said passivation film, and wherein volume of the voids is not less than 5% in the porous semiconductor region of not less than 1 nm and not more than 30 nm from the surface of the semiconductor layer on the passivation film side.

18. (Currently Amended) An active matrix type display device according to claim 15, using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode and a passivation film are successively laminated, and means, formed on a surface portion of the semiconductor layer between the semiconductor layer and the passivation film, for preventing fixed charges from the passivation film from entering the semiconductor layer, wherein said means comprises a porous semiconductor region formed between semiconductor layer and said passivation film, and wherein the average value of radius of the voids in the porous semiconductor region is not more than 5 nm.

19. (Currently Amended) An active matrix display device according to claim 15, using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode and a passivation film are successively laminated, and means, formed on a surface portion of the semiconductor layer between the semiconductor layer and the passivation film, for preventing fixed charges from the passivation film from entering the semiconductor layer, wherein said means comprises a porous semiconductor region formed between semiconductor layer and said passivation film, and wherein not less than 0.01 atom % and not more than 0.1 atom % of helium is contained in the porous semiconductor region of not more than 30 nm in depth from the surface of the semiconductor layer on the passivation film side.

20. (Currently Amended) An active matrix display device according to ~~claim 15~~ claim 16, wherein the passivation film is of an organic resin.

21. (Currently Amended) An active matrix display device according to ~~claim 15~~ claim 16, wherein a picture element electrode formed on the passivation film of the switching element overlaps the switching element.

22. (Currently Amended) An active matrix display device according to ~~claim 15~~ claim 16, wherein a common electrode formed on the passivation film of the switching element overlaps the switching element.

23. (Currently Amended) An active matrix display device according to claim 15, using a thin film transistor as a switching element in the displaying portion or driving portion wherein said thin film transistor comprises an insulating substrate on which a gate electrode, a gate insulating film, a semiconductor layer, a drain electrode, a source electrode and a passivation film are successively laminated, and means, formed on a surface portion of the semiconductor layer between the semiconductor layer and the passivation film, for preventing fixed charges from the passivation film from entering the semiconductor layer, wherein said means comprises a porous semiconductor region formed between semiconductor layer and said passivation film, and wherein the current value between the source electrode and the drain electrode in the case of applying a voltage of -40 V to +40 V to a second electrode (a back gate electrode) provided on the switching element is not more than 10 times the current value between the source electrode and the drain electrode in the case of providing no back gate electrode.

24. (Previously Presented) An active matrix display device according to claim 2, wherein said surface portion of the semiconductor layer is an amorphous Si region formed on the semiconductor layer.

25. (Currently Amended) An active matrix display device according to claim 15 claim 16, wherein said porous semiconductor region is an amorphous Si region.